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ABSTRACT

The casebook attempts to demonstrate the value of research and development for vocational education by examining selected projects conducted in the southern States that comprise the Southwide Research Coordinating Council. Resumes of the 26 projects carried out by the research coordinating units of 10 States are presented: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia. Included for each project is the following information: agency, project director or contract person, duration, funds, project's purpose, and a statement assessing the impact of the project in terms of its overall contribution to education. (NJ)

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EDUCATIONAL IMPACT

A Report of the Southwide Research Coordinating Council on the Impact of Selected Vocational Research and Development Activities

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

If vocational education in the United States is to keep pace with the rapidly changing technology of our society, it is important that intensive research and development efforts be maintained and strengthened. The establishment of the Research Coordinating Units in each of the states following the enactment of the Vocational Education Act of 1963 (P.L. 88-210) has done much to formulate a comprehensive research and development system across the nation as well as to establish a network for research and development dissemination.

Measuring the impact of this vocational educational research is a difficult task. First, not all research can be classified successful in the sense of identifying or demonstrating new solutions to existing problems. Indeed, research funds must be considered high risk *seed money* which may or may not yield fruitful results. However, in the true research sense, projects that do not produce the intended results can make valuable contributions to vocational education as they eliminate possible solutions to existing problems. Second, educational research will frequently have a long range implementation period extending over many years or even generations, thus any impact statement today may be obsolete tomorrow.

In an effort to document some of the impact of vocational education research, the Southwide Research Coordinating Council consisting of the Research Coordinating Units in the 14 states in Southeastern United States, has compiled this casebook of impact statements concerning selected research and development activities. While this document is not in any sense an attempt to demonstrate the value of all research and development activities, it is designed to demonstrate that vocational education research and development has had a significant impact on the vocational education program, services, and activities in the Southeastern United States.

Robert M. Schneider, President
Southwide Research Coordinating
Council for Occupational Education

August, 1975

VT 102529

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Project Resume

Project Title:

Alabama Vocational Management Information System (AVMIS)

Agency:

Division of Vocational Education and Community Colleges
State Department of Education
Montgomery, Alabama 36130

Project Director or Contact Person (Name, Address, Phone):

Dr. T.L. Faulkner, State Director
Division of Vocational Education & Community Colleges
Montgomery, Alabama 36130 Phone: (205) 832-3476

Duration: From July 1972 To Continuous

Funds: Federal _____ State _____ Other _____

Purpose of Project: AVMIS is designed to provide vocational education information to administrators and teachers for effective management and planning of vocational education programs.

Description of Project: The AVMIS concept was as a two part state-administered Part C project. The manpower demand project, initiated in July 1972, was to develop manpower data by USOE vocational program codes. Project activities evaluated available information, the current state of the art and initiated contacts with manpower data developers resulting in a systematic interchange of data and data needs. Current projects are multi-purpose: (1) The inter-agency working relationships are being extended both within the state of Alabama, with other similar project activities in other states and associated Federal agencies; (2) Occupational Employment Statistics (OES) Project data are being provided in a special format with OES to USOE code conversion procedures to provide a ready source of estimated employment and demand data by occupation by industry; (3) Public and private institutional supply data being integrated into the system; (4) County planning packets developed for distribution; and (5) A series of "Manpower Notes" are being initiated.

An automated fiscal data base which can be accessed and updated via computer terminal located in the fiscal office of The Division of Vocational Education and Community Colleges has been established. The system provides budget information on all secondary vocational program personnel by service area, school, school system and by funding source (State; Federal Part B, F, G and 102b). An automated secondary student accounting system provides a data base directly interfaced with and supplemented by the fiscal data base. The culmination of two pilot studies, a one-half page, eleven item, optical scan form supplies the necessary components of the student data base.

Impact of project in terms of contribution to education:

The impact of the project on education in Alabama can best be illustrated by the increased interest and support of all AVMIS components--fiscal accounting, student accounting and manpower data. The support has come from all areas both inside and outside of the educational community. Some examples of project related impact are:

1. An automated fiscal accounting data base provides for the printing of contracts, analysis of fund flow, immediate analysis of obligated/unobligated funds, projected budget requirements, correlation of student enrollment forms to the individual teacher, and data for assigned budgetary reports.

2. An accounting system for students by teacher by school by program by occupational objective. The system is designed to provide enrollment, completions and follow-up information necessary for state and federal reporting, program evaluation, facility utilization studies, student/teacher analysis, etc.

3. A manpower data base providing both supply and demand data on a statewide and twelve sub-state area basis for program and facility planning, counselor and student information on occupational supply and demand, etc.

4. Provision for the integration of all components to provide in-depth data for analysis of vocational education's impact on the state or an area of the state in terms of expenditures, teachers, facilities, enrollment, completions, follow-up, program and facility evaluation, and occupational demand and supply data. All are components necessary for the administration of secondary and post-secondary vocational education programs.

5. Transferring of final reporting responsibilities from each service area to the AVMIS staff thereby resulting in an increase in time available to teachers for more classroom activities and allowing district and state level personnel more supervisory time.

6. Reduction in teacher reporting requirements to the minimum level required to maintain effective supervisory control.

7. Effective management of Divisional data to rapidly meet special data requests.

8. An increase in planning activities at all levels of vocational education as the data are made available to assist local planning efforts. Preliminary vocational education planning visits to each of the 126 local education agencies in Alabama in the Summer and Fall of 1974. 25 subsequent planning meetings with LEA's considering the construction of an area vocational center. Assistance to proposal developers in all areas of the state.

9. Special data requests from teachers, administrators, and planners to provide information and technical assistance are now more effectively facilitated resulting in the provided information being more accurate and useful.

Project Resume

Project Title:
Developing Placement Services for Vocational Terminees

Agency:
Division of Vocational Education & Community Colleges
State Department of Education
Montgomery, Alabama 36130

Project Director or Contact Person (Name, Address, Phone):
Dr. T.L. Faulkner, State Director
Division of Vocational Education & Community Colleges
Montgomery, Alabama 36130 Phone: (205) 832-3364

Duration: From July 1, 1974 To Continuing

Funds: Federal _____ State FY75 $94,500 FY76 $75,000 Other _____

Purpose of Project: To develop school-based placement services for vocational students who exit the secondary school, either as graduates or as dropouts.

Description of Project: The research and development phase of the project began in five school systems with funds from Part C, Section 131(a) of Public Law 90-576. The exemplary phase was conducted in six school systems with funds from Part D, Section 142(d) of the Act. The systems in the exemplary phase represented a variety of geographic and demographic conditions. Included were small rural systems, a large metropolitan system, systems in small cities, and a cooperative effort in which a rural county system secured the assistance of two city systems within the county in order to achieve a county-wide placement effort. Part D funds were used to reimburse the salary and travel of one full-time placement coordinator in each of the exemplary sites. Efforts have been directed toward placing vocational students in jobs or in programs for further technical or academic preparation. The exemplary placement project sites, some in their third year, are now seeking to identify the kinds of direction, information, and support needed by vocational teachers in order to meet the placement needs of their terminating students.

Impact of project in terms of contribution to education:

The impact that this project has had on education in Alabama can be viewed in terms of the continued interest in the placement concept and the increasing numbers of teachers and students involved in placement activities. The following items may be cited as evidence of the impact of the project.

1. The research and development phase involved five Alabama school systems that had a total enrollment of approximately 83,000 students.
2. The exemplary phase of the project was conducted in six school systems and involved two additional cooperating systems. The combined total enrollment in all systems was approximately 104,000 students.
3. Exemplary placement programs for vocational students have been given top priority in the use of the State's share of Part D funds for FY 76.
4. All vocational counselors in the state have been redesignated as Coordinators of Career Guidance and Placement. A minimum of 20 percent of their time is to be spent in job placement activities. There are 141 Career Guidance and Placement Coordinators serving in 56 school systems at this time.
5. The State Director of Vocational Education has issued the following policy statement to the vocational teachers in the state, "It is the responsibility of the local education agency to develop comprehensive placement services for vocational education students through the coordinated efforts of the vocational instructors, guidance staff, administrators, and community agencies. The goal of this comprehensive placement service is to place every student exiting the vocational program in an occupation or a continuing education program. The responsibility of the vocational teacher continues until the student has made a satisfactory transition into an appropriate occupation or into a post-secondary occupational program. In systems with vocational guidance personnel the vocational guidance personnel are responsible for coordinating the local vocational placement program."
6. During the 1975 summer conference of each vocational program area, personnel from the Division of Vocational Education and Community Colleges, State Department of Education, conducted a short program related to placement, presenting the findings from the exemplary programs, discussing the policy statement from the State Director, and answering questions from teachers.
7. The first draft of a placement manual has been prepared for use by vocational teachers. The State Supervisor of each vocational service area has appointed a committee to review the tentative draft of the manual and make recommendations for revisions. The final draft of the manual will be made available to all vocational teachers during the 1975-76 school year.

In summary, it may be said that State share Part D funds have enabled an initial impetus from discretionary Part C funds to be expanded and brought to fruition, culminating in organizational and policy changes at the State level. Within the 1975-76 school year every vocational teacher in the State will have some awareness of the exemplary placement programs and will be assisted in working toward the occupational or educational placement of all vocational students.

Project Resume

Project Title:
Developing a Curriculum Guide For Use by Vocational Orientation Teachers... "Investigating Career Opportunities"

Agency: Little Rock Public Schools of Pulaski County
West Markham and Izard Streets
Little Rock, Arkansas 72201

Project Director or Contact Person (Name, Address, Phone):
Mr. Ernest L. Rush and Mr. Noel McGuire, Little Rock Public Schools, West Markham and Izard Streets, Little Rock, Arkansas 72201 Phone: (501)376-3851

Duration: From June 7, 1971 To June 2, 1972

Funds: Federal $ 18,907 State _____ Other (Local) $ 14,263

Purpose of Project: To develop an occupational orientation curriculum that will allow students to investigate themselves in relationship to their interest and abilities.

Description of Project:
The intent of this project is to focus on a meaningful junior high school occupational orientation curriculum.

It is proposed that career clusters be divided into three established instruction areas: Industrial Education, Home Economics, and Business Education. A curriculum entitled, "Investigating Career Opportunities" was developed and field tested at Pulaski Heights Junior High School in Little Rock, Arkansas. Each instructional area was assigned the clusters most related to that field. Two teachers from each of these instructional areas and one guidance counselor were selected to develop the curriculum guide based on behavioral objectives that were measurable.

Three classes received instruction in the newly developed curriculum, with students rotating each 12 weeks to another teacher. At the end of the school year, students in all three classes had been oriented to career opportunities through some 40 career units. Considerable revision was necessary after field testing the materials for one year. The Little Rock School System has now adopted this rotating system of teaching career opportunities as a requirement of all junior high students. The model is being modified in some of the schools where one teacher can teach the entire program. This project involved the 15 occupational clusters designated by the U. S. Office of Education.

Impact of project in terms of contribution to education:

This developmental project resulted in a 341 page curriculum guide for vocational teachers in Arkansas. The primary purpose of the program was to provide an approach to self appraisal, an overview of careers, and guidance in selecting a future course of study for the student.

At the time this project was awarded to the Little Rock School District, Arkansas was endeavoring to expand vocational education through a prevocational or career orientation program. The curriculum guide developed by Little Rock made a major contribution toward this expansion effort. The program was designed as a team teacher approach but the career concepts were developed in such a way that they can be adapted to various teaching patterns.

The Little Rock School System adapted this approach throughout the entire district. Through further field tests and personnel development, many modifications have been made in the teaching methods but the guide is maintained as an important part of the junior high instructional program in the Little Rock Schools.

Some 700 copies of the guide were produced with 400 being disseminated to school districts throughout the state. Many Arkansas schools have made on site visits to Little Rock to observe the program in operation. Moreover, numerous inquiries have been received from other states. Although the supply of curriculum guides is exhausted, the State Agency and Local District receive requests for the publication.

This project was granted the "Certificate of Merit" award by the U.S. Office of Education as an outstanding program. Furthermore, the Little Rock School District was invited to present this program before the entire Arkansas Department of Education staff.

As a result of this research project and successive endeavors, Arkansas has developed a vocational orientation program which has received considerable state, regional and national recognition.

These research developmental materials or modification of these efforts have been infused into school districts statewide.

Concepts from this study and subsequent efforts have been effectively incorporated into the teacher education delivery system in the State.

Project Resume

Project Title:
Arkansas Vocational Education Leadership Development Extern Program

Agency: University of Arkansas, Fayetteville, Arkansas 72201 and State Department of Education, Little Rock, Arkansas 72201

Project Director or Contact Person (Name, Address, Phone): Dr. Denver Hutson University of Arkansas, Fayetteville, Arkansas 72701 501/4758 or Mrs. Peggy Patrick, Arkansas Department of Education, Little Rock, Arkansas 72201 501/371-1855

Duration: From February 15, 1971 To June 30, 1972

Funds: Federal $ 18,730 State _____ Other _____

Purpose of Project: The purpose of this project was to design a leadership development program for potential leaders in vocational education.

Description of Project: The Extern Program was initiated as a cooperative endeavor involving local educational agencies, the Arkansas Department of Education, and the University of Arkansas. Rapid technological advances and increasing awareness of the importance of preparing all students for their next step whether it be further education or gainful employment, has resulted in increased recognition of the vital role that vocational and technical education fulfills in preparing competent workers. To meet the challenge facing vocational education as programs expand and enrollments increase, individuals with adequate preparation to assume leadership roles are critically needed. The Extern Program was designed to prepare education coordinators, directors, supervisors and other leadership personnel, by combining a planned sequence of course work and directed field experience. The program builds upon the basic teaching competencies of present personnel and provides school districts an opportunity to give active support to their staff members in becoming effective vocational leaders in their respective local programs. The program consists of a summer workshop followed by a week visitation in a postsecondary vocational-technical education center; a directed field experience program; and a series of 10-12 Friday-Saturday seminars scheduled during the academic year. The program is designed to bridge the gap between educational theory and practice. The academic course work, field experiences and seminars are planned to complement and supplement each other.

Impact of project in terms of contribution to education:
The Extern Program was widely publicized within and outside Arkansas through the utilization of newspapers, radio, television, and civic organizations. A brochure was disseminated statewide to schools, resource persons who assisted in various ways with the workshop and seminars, and to educational personnel in a number of states. A major article was published in the Arkansas Department of Education News Magazine which receives intensive statewide distribution and some out-of-state distribution. A thirty-minute television program involving the extern director and two externs, was presented by the State Education Television Station near the end of the series of seminars. This project was granted a "Certificate of Merit" by the U.S. Office of Education as an outstanding program in the Nation.

The Arkansas Extern Program, as planned and carried out, represented an effective means to prepare for leadership development in vocational education. The enthusiasm of the fourteen externs created an educational environment that was truly conducive to maximizing leadership development. As a result of the program, each participant had an opportunity to move into a leadership position. Each will be in a position to offer effective leadership, whether as a director, supervisor, coordinator, or teacher.

Perhaps the most significant evaluation of the program was the universal request to continue the same type of program in the future. The extern group forcefully reiterated that the issue of whether or not an experience of this nature was accomplished by university course credit was of little consequence. Since the participants traveled as far as 300 miles from their homes to attend some of the seminars and gave up twelve weekends during the academic year that could have been spent with their families, a desire to continue the program is convincing evidence of its value. Therefore, it was concluded that the concept of the Arkansas Extern Program has unlimited potential as a program for leadership development in vocational education.

In view of the success of this project, the concepts have been continued on alternating years to prepare potential leaders for emerging leadership positions in the State. All of the individuals in the research program are currently in some level of leadership. Furthermore, in June 1974, a follow-up was made to ascertain the status and/or plans of the participants for the second "Extern Program" conducted during the 1973-74 school year. Ten of the participants had moved into positions demanding more leadership responsibility than formerly and the other four participants had been assigned extended responsibility for leadership in their previous position.

Currently the third Extern Program is being conducted for potential leaders in vocational education. This program has had a major impact on the overall teacher education delivery system in Arkansas. Many of the techniques, approaches and experiences are being incorporated into the system by teacher educators through preservice and inservice preparation of vocational teachers in Arkansas.

The successes of this program have extended beyond the boundaries of Arkansas. Numerous inquiries have been received from other states. As a specific example, Oklahoma has implemented many of the experiences developed through this research project.

Project Resume

Project Title: An Exemplary Model for a Total Ecological Approach to Non-graded Vocational Programs in Separate Educational Centers.

Agency: Division of Vocational Education
Department of Education
State of Florida

Project Director or Contact Person (Name, Address, Phone): Dr. K. M. Eaddy Chief, Bureau of Vocational Research Dissemination and Evaluation. Department of Education, Room 258, Knott Building, Tallahassee, Florida PH: (904) 488-3995

Duration: From July 1, 1970 To June 30, 1971

Funds: Federal $116,318.00 State _____ Other _____

Purpose of Project: The major purpose of the project was to implement an exemplary model for a total approach to non-graded vocational programs in separate educational centers located in four metropolitan areas of Florida.

Description of Project: Specifically, objectives of the project were to: (1) Improve attitudinal interaction of the student with his environment; (2) Improve academic achievement of the student; (3) Develop occupational skills of the students; (4) Develop or improve methods, techniques, skills and attitudes of the teacher to effectively teach disadvantaged students.

The exemplary program was designed to provide: (1) A broad occupational orientation at elementary and secondary school levels to increase awareness of the range of options open to them in the world-of-work. (2) Work experience, cooperative education and similar programs, in addition to those currently available, making possible a wide variety of offerings in many occupational areas. (3) Specific intensive training in job entry skills for students just prior to the time they leave school. (4) Intensive occupational guidance and counseling during the last years of school and for initial placement of all students at the completion of their schooling.

Processes relevant to the exemplary vocational program were: (1) developing linkages among components of the educational system, between the educational system and the community and between academic and occupational skills so that making an occupational choice and learning the necessary job attitudes and skills was a continuous process for the student, involved his parents and community and made available a wide range of vocational options; (2) developing innovative procedures for orienting disadvantaged students to occupational knowledge, skills and attitudes, and the world-of-work; (3) providing a wide variety of occupational programs, using innovative approaches to guidance, counseling and placement of students.

Impact of project in terms of contribution to education:

An equally important objective of this project was preparation of teachers to work with disadvantaged students which entailed training student teachers and in-service teachers in appropriate methods and attitudes for effectively interpreting and translating behavior patterns of disadvantaged students into positive, constructive modes.

Measurement of achievement indicated that: (1) Students changed in attitudinal interaction with their environment. (2) Students gained academic skills at the same level as students enrolled in traditional programs. (3) Students learned more entry-level occupational skills than students in traditional programs. (4) Teachers participated in programs to improve techniques in working with disadvantaged youngsters. (5) Occupational orientation programs were offered to all students enrolled in the program. (6) A wider variety of occupational programs were made available to students. (7) Intensive training for job entry skills was provided for students who were leaving school prior to graduation, and for dropouts returning to school. (8) Intense occupational guidance and counseling was provided students enrolled in the first year and many were not over 16 years of age.

As the project was continued by Dade, Duval, Escambia and Hillsborough school districts, objectives of the program became more comprehensive to include additional educational levels and to serve all students. This project served as a forerunner of the career educational movement in Florida.

Using the model developed, several additional school districts requested funding support to plan and implement career education programs. One model was implemented by the Orange School Board. Others were added in Pinellas, Leon, Broward and Brevard school districts in succeeding years.

Results from those programs were useful in having career education assigned as a high priority program by the State Board of Education. The Legislature appropriated more than $12,750,000 so that each school district could have resources available to plan, implement and evaluate career education concepts into the educational program.

The initial grant of $116,318.00 from the U. S. Commissioner's share of Part "D" P. L. 90-576 provided a specially designed individualized instructional and counseling program with 147 teachers, administrators and support staff who served approximately 1300 students at four urban sites. That program was the forerunner of career education which expanded to all 67 districts so that by 1975 there were approximately 3800 schools with 57,000 teachers serving 851,000 students. Approximately $3,000,000 of vocational education monies have been expended for career education programs in addition to the 12,750,000 state dollars at a pupil cost of under twenty dollars to develop the Florida programs.

Project Resume

Project Title:

Project LOOM: Learner Oriented Occupational Materials

Agency:

Department of Industrial Arts Education
College of Education
Florida State University
Tallahassee, Florida 32306

Project Director or Contact Person (Name, Address, Phone): Dr. James Heggen, Associate Professor, Department of Industrial Arts Education, College of Education Florida State University, Tallahassee, Florida 32306 (904) 644-6526

Duration: From July 1, 1970 To June 30, 1971

Funds: Federal $52,336.00 State _____ Other _____

Purpose of Project: The purpose of the project was to develop and field test the effectiveness of individualized curriculum materials in learning packages focused on one occupation appropriate to the educational level for elementary and middle school students.

Description of Project: Specifically, objectives of the project were to: (1) Develop among participants and others in cooperating school districts an understanding of the role of career education and the terminology associated with it. This includes an understanding of the relationships which must be developed between the academic and the vocational protions of school programs. (2) Develop instructional materials of a unitized nature which will provide teachers with the necessary information and resources to conduct hands-on career education activities in elementary and middle schools. (3) Develop teacher abilities needed to write and use LOOM units. (4) Develop teacher abilities to use tools, equipment, and materials in the classroom. (5) Assist teachers and participating districts in the implementation and evaluation of the LOOM program.

The project began with an assessment to determine curricular needs at the elementary and middle school levels. It was determined that there was a need to develop materials, methods, teaching competencies and implementation patterns for an experiential based career education program which might be infused into existing elementary curricula.

To accomplish the objectives, approximatley 130 teachers from 13 school districts attended in-service workshops to learn objectives and procedures for learning package development. Continuation of the project over a period of four years yielded approximately 150 learning packages focused on occupations appropriate to the learning patterns of students at elementary and middle school levels. Each package has been field tested and proves effective in teaching exploration of occupations.

Impact of project in terms of contribution to education:

This project has been one of the most successful research-development programs in the State. Reasons for its success are directly related to the need for the products of the project; namely, instructional materials, a delivery system including evaluative devices and a plan for diffusing the products and processes statewide.

All elementary school and junior high school teachers have participated in training programs designed to prepare them for effective use of the hands-on materials. Products from the project have been highly integrated into existing educational programs as teachers have become skillful in redesigning their programs of work to include the concepts of career education.

Wide distribution has been made of the materials to persons outside the State interested in operating career education programs at the elementary and middle or junior high school levels.

It has been shown through this project that diffusion of educational innovations is greatly increased when the products developed are based upon valid need data obtained from carefully conducted assessments of potential user groups.

The initial grant of $52,386.00 from Florida's share of Part "C" P. L. 90-576 has assisted in the development of a fused career awareness program for elementary and middle school students. Effective instructional materials are available in all 67 school districts and are being used widely in model district career education programs. The total project development, field test and dissemination cost was approximately $3,700 per school district.

Project Resume

Project Title: Program of Education and Career Exploration

Agency: Georgia State Department of Education

Project Director or Contact Person (Name, Address, Phone):
Mrs. Mildred Hutcherson, Georgia Department of Education, 321 State Office Building, Atlanta, Georgia 30334 (404) 656-2516

Duration: From 1969 To 1972

Funds: Federal 162,500 per yr. State ____ Other ____

Purpose of Project: To provide career exploration experiences in real work situations for the middle school students.

Description of Project: Program of Education and Career Exploration was designed to involve students in the actual working community by having them work for short periods of time in several work settings. The work is exploratory in nature and is not designed to train students for specific occupations. However, it does provide the students with hands-on experiences in the actual work settings themselves. The program involves group guidance and classroom activities that help the student relate the work experience to his own interest and ability.

Impact of project in terms of contribution to education:

The Program of Education and Career Exploration has grown from a basic project beginning with 18 pilot programs in 1969 to become a fully operational Georgia vocational education program with 130 teachers and 25,600 students involved annually. At the present time, the program actually rivals the traditional vocational education co-op programs in terms of teacher and student partic pants.

Project Resume

Project Title: Individualized Instruction Process for Georgia Secondary and Post-Secondary Vocational Technical Programs

Agency: Office of Adult and Vocational Education, Georgia Department of Education and The Division of Vocational Education, The University of Georgia

Project Director or Contact Person (Name, Address, Phone):
Paul Scott, Director ORCU, Georgia Department of Education, 258 State Office Building, Atlanta, Georgia 30334 (404) 656-2566

Duration: From February 1971 To June 1973

Funds: Federal 293,000 State 54,000 Other N/A

Purpose of Project: To design a system for developing valid individualized instructional materials for vocational education, then use that system to develop and try out five post-secondary and ten secondary programs.

Description of Project: This project was funded to develop an overall pattern for individualizing instruction in Georgia's secondary and post-secondary vocational education programs. Basically it was supposed to use the system's approach to curriculum development. The project was to identify and apply the latest in learning theory to the development and implementation of ten individualized programs for secondary school vocational clusters and five individualized programs for post-secondary vocational technical school programs. Each program involved in the project was to be totally individualized with both self-paced features and the provisions for a student to enter and exit the program according to his own personal needs. The end product of the project included both written and audio visual materials as well as a classroom management system.

Impact of project in terms of contribution to education:

1. All new programs being developed for Georgia vocational education schools are using this basic design.

2. The post-secondary schools believe in the system enough that they are planning to transfer all of their instruction to this approach during the next five years.

3. In one year after the completion of the project, 81 individual instructors had transformed their laboratories to totally individualized programs.

4. This number is more than doubling each year. Currently the demand far exceeds the Office of Adult and Vocational Education's ability to supply the start-up materials, staff development and basic equipment cost.

5. Students are able to enter or exit post-secondary vocational technical schools with individualized programs on any given day.

6. Program content is currently being covered more certainly and completely.

7. The efficiency of vocational education programs that have been individualized has been greatly increased. An example of this is one post-secondary program that has a 21 student capacity at any given time. Prior to individualization, the program began each year with 21 students, and because of the highly technical nature of the material, each time a student withdrew, for whatever reason, the instructor could not replace him with a new student. Consequently, by the end of the year and at graduation time, there were only about 7 students left in the program. With individualization, that program maintains a full load of 21 students at all times, and has trippled its production.

Project Resume

Project Title:
Development and Demonstration of a Model Office Program for Business and Office Education

Agency:
Jefferson County Board of Education
3332 Newburg Road, Louisville, Ky. 40218

Project Director or Contact Person (Name, Address, Phone):
Mr. William Aiken
Director of Vocational Education
3442 Preston Street, Louisville, Ky. 40213 Phone: (502) 361-9251

Duration: From July 8, 1971 To June 30, 1973

Funds: Federal $32,980 State $3,664 Other

Purpose of Project: This project was designed for the purpose of developing a simulated model office program that would serve as a model laboratory for the state of Kentucky.

Description of Project: This project involved the development and demonstration of a Model Office program to study the feasibility of using the model office concept in other Kentucky schools. The Simulated Model Office program set the stage so that students, through application of knowledges and skills, could cultivate desirable characteristics and attitudes toward work, such as dependability, promptness, resourcefulness, pride and other attitudes for the maintenance of good human relations. The many problem-solving situations presented through Model Office simulation, as well as the performance of ordinary day-to-day office operation, challenged the students to develop tact, in addition to accomplishing the task; to be objective regarding their work and interpersonal relationships; to work effectively with fellow employees; to work with a supervisor; to organize detailed work; and to develop self-confidence.

Impact of project in terms of contribution to education:

This demonstration project was the first Model Office program for the state of Kentucky. This was the first program to have furnishings and equipment that gave it an atmosphere of realism. As a result of this project, schools that offered courses entitled Simulated Office Practice revised and improved their curricular providing more realistic and beneficial experiences for their business and office education students. The inclusion of Model Office enabled schools to supplement their vocational programs by allowing more students to have realistic office experience prior to graduation. The average enrollment in vocational business and office education in a typical school is approximately 60. In the past, the cooperative program has been able to accommodate approximately 20 of these students. By having a Model Office program 20 to 40 additional vocational students can receive realistic office training during their senior year. For those schools that do not have a cooperative office program, having a Model Office program provides these students with the opportunity to go beyond the acquisition of skills and to develop the ability to handle interpersonal relationships and attitudes necessary for successful office employment. Simulated Model Office introduced few new basic skills, but sought to build on those skills previously acquired through intensive application. It developed within the students an awareness of the proper functioning of the entire business office. The model program promoted the need for the development of realistic simulated office programs both on a local and national level. Due to its success, this model program has built a reputation for the benefit of vocational education and has laid a strong foundation for a new concept in vocational business and office education in Kentucky.

One of the specific objectives of the model program was to develop guidelines for a Simulated Model Office program that can be adapted to fit individual business and office programs in other schools throughout the state.

With only one teacher and 14 students the first year in 1971-72, Model Office grew to include 39 schools with 47 teachers and approximately 1,030 students during 1974-75. The growth for 1975-76 will be 10 schools with 16 teachers. The rapid expansion of this program is a good indication that the demonstration project was a success. The state universities are aware of the progress of Model Office and have begun to incorporate the Model Office concept into their teacher education programs.

Project Resume

Project Title:
A Comprehensive Career Education Model, Grades 1-12, Research and Development Project

Agency:
Bowling Green Independent School District
Bowling Green, Kentucky

Project Director or Contact Person (Name, Address, Phone):
Mr. Otto Mattei
Bowling Green Independent School District
Bowling Green, Kentucky 42101 Phone: (502) 842-3323

Duration: From July 1, 1971 To Aug. 30, 1974

Funds: Federal $355,000.00 State _____ Other/Local $80,000

Purpose of Project: The purpose of this effort was to identify, develop, and implement a integrated career education program with the school systems structure; and to support the developmental model program with supplemental research activities and with a third-party evaluation component.

Description of Project: Geographically, the project is located in an urban setting of 37,000 people with a bi-racial, multi-cultural make-up. The employment opportunities include industry, business, education (Western Kentucky University is located in Bowling Green), and agriculture. The public school structure is seven (7) elementary (K-7); one (1) junior high (8-9); and one (1) senior high (10-12) school. The staff (290 certified) serve over 5,600 students. Financially, the project began in 1971 with a state Part C grant; in 1972 the project was supported by state Part D funds, and in its third year, the Commissioner's Part C funds provided the financial basis for development and research. Administratively, the projects staff consisted of one person...the project director. In the third year, he was joined by a Research Coordinator. Staff training was initiated with one-third of the administrators, teachers, librarians, guidance counselors, and special teachers; with an intensive summer inservice. Thus a cadre of personnel was developed, qualifying as trainers and in-house consultants for the other staff members. Developmentally, from this cadre of teachers and administrators, the school system's instructional program grew in scope and depth; developing creative and imaginative approaches, eventually permeating the entire staff to a program which is people oriented (Project PEOPLE) and life centered around the teacher, the students, and the occupation.

Impact of project in terms of contribution to education:

"...the Bowling Green School System stands on the threshold of serving as a model for the nation's schools," so states numerous third-party evaluators. Also, they extol the accomplishments by identifying "the school system as a model, as a center for professional development, as a research base, and as a model to demonstrate how the educational process can be focused to assist a society in developing, appreciating, and internalizing the self-worth of each of its citizens."

The highly acclaimed comments from nationally recognized third-party evaluators are not without substantiated evidence of its developmental effort. Initiating in 1971, an obscure and ambiguous concept with unknown strategies and techniques, the Bowling Green school system personnel have developed the career education concept into a strategy for teaching and a vehicle by which articulation and unification of the curriculum can be achieved. The local Board of Education recognizes the projects contribution to education by establishing a Board Policy (No. 3170) stating that "career education shall be an integral part of instruction in all grades and subject areas," and resolutions commending the staff "for designing and implementing an outstanding career education program, and continuing to carry out board policy 3170."

The comprehensiveness of the effort is recognized in educational levels: the elementary level has made an impact through a good design, involved personnel, dedicated leadership, exemplary model, administrative support, a process of decision-making for curriculum design, a remodeled (revised) elementary guidance program and participation of the Bowling Green citizens; the junior high level with its emphasis on career exploration have infused "mini-look" programs, shared activities, career corners, career development student records, and a systemized study of career clusters; the high school level has resulted in the identification and refinement of career-related activities and the preparation and integration of these activities into units of work in traditional subject matter areas. The Bowling Green High "Course Catalog" provides all incoming students with "career preparation suggestions" and flexibility in curricular approaches to traditional subjects.

Realizing the success being achieved in the project, the state initiated a unique "personnel development and dissemination project to share Bowling Green's success with others. Although short in duration, over 350 educators (in-state and out-of-state) participated in this visitation opportunity. In response to this opportunity, 97.8% of those visiting indicated a positive response to this first-hand experience to learn about the "whats" and "hows" of the program. The unifying center of the program evolved around using the person-in-the-occupation with a unit format of: content (subject area and concepts), resources (human, material), and performance (achievement, experiences and activities) which permitted an annual community participation of 1400 citizens as resource people.

The impact variables and the program's contribution to education can be identified in several areas: the educational levels; curriculum areas; content; career clustering; articulation of phases; community involvement; and curriculum material development and utilization. Among the curriculum materials developed were the "Career Education Manual for Teachers, Counselors, & Administrators," a "Yellow Pages" of course offering & selection, curriculum guides, simulation activities & experiences, audio-visual slide series, transparencies, and unique game, puzzle, and activity kits.

Project Resume

Project Title:
Career Development of Youth for the World of Work

Agency:
Winn Parish School Board
Winnfield, Louisiana 71483

Project Director or Contact Person (Name, Address, Phone):
Ms. Jane Purser
Winn Parish School Board
Winnfield, Louisiana 71483 Phone: (318) 628-5923

Duration: From July 1, 1975 To June 30, 1976

Funds: Federal _____ State $38,313.75 Other $21,866.00

Purpose of Project: To provide students in grades seven, eight and nine those experiences and knowledges that will aid them in making appropriate educational and occupational choices.

Description of Project: Students will be provided an opportunity to try themselves out in at least one or more real simulated work experience under each occupational group out of six groups of occupations.

Occupations will be separated, using a modification of Roe's two dimensional classification system, into six major categories of interest. By applying these categories in a sequential manner we will be able to follow a continuum of study from an orientation program of gaining knowledge of self and working with others to one of working with things or concrete objects.

The six categories described by Roe are as follows: (1) Service to Others, (2) Business, (3) Organization, (4) Expressing Ideas, (5) Outdoors, and (6) Technology.

Impact of project in terms of contribution to education:

At the present time there is no formal Vocational Education program for all students. It is believed with this program all students will be informed and the individual, the community and state will benefit by overcoming the gap between the student and his vocational life.

It will provide state and local Vocational Education systems, new approaches and new ways never before used to create a bridge between school and earning a living.

Project Resume

Project Title:

Mobile Exploratory Unit for Vocational Development

Agency:

East Feliciana Parish School Board

Project Director or Contact Person (Name, Address, Phone):
Mr. James V. Soileau, Superintendent, East Feliciana Parish School Board,
P.O. Box 397, Clinton, Louisiana 70722 Phone: (504) 344-2998 or 683-5420

Duration: From May 15, 1974 To June 30, 1976

Funds: Federal $49,105.94 State 0 Other 0

Purpose of Project: The criteria for our proposal is based upon the idea of youth for the world of work and is approached through a belief in the philosophy of career development education which in itself necessitates good guidance and counseling service which, as noted, are planned for in this program.

Description of Project:

The project, as proposed, would provide for a mobile self-powered exploratory vocational unit which serves the needs of seven schools which have seventh and eighth grade students. This mobile unit consist of six simulated work stations. These work stations provide adequate data and materials to meet the objectives stated when considered in relation to the guidance program built into the school system. The unit would be left at each campus for five weeks and instruction and supervision would be conducted by a well qualified vocational teacher with guidance attribute since he would work closely with the counselor. One teacher aide is also employed to assist this teacher.

Impact of project in terms of contribution to education:

In view of the fact that much of Louisiana and the nation is still rural in nature and is remote as to the availability of actual job related experiences, we believe that this mobile program would prove valuable in bridging the gap between the world of work through simulated experiences and earning a living. The importance is the motivational element in terms of the student as his academic subjects certainly deem valuable as to limited research in this area under such condition as herein described. A determination of the effect on drop-outs at this grade level could be made as well as the effect upon discipline. It is well known that these areas are common problems at this particular age group.

Project Resume

Project Title:

A Career Education Project on the Mississippi Gulf Coast

Agency:

Mississippi State Department of Education
Division of Vocational and Technical Education

Project Director or Contact Person (Name, Address, Phone):

J.H. McMinn
Box 771
Jackson, Mississippi 39205 Phone (601) 354-6819

Duration: From March, 1973 To August, 1974

Funds: Federal $165,755. State/Local $45,381. Other

Purpose of Project: The primary goal of this project is for the Moss Point Municipal Separate School District to produce a product (students) with sufficient occupational awareness and exploratory experiences to make sound career decisions; to make career preparation in accordance with these decisions; and to enter and advance in chosen careers.

Description of Project: The project brought together the many facets of the ten operational career education projects in the State. It was designed to utilize the most successful aspects of the career education concept focusing on bridging the gap between students' school experiences and the world of work in a school system with large numbers of minority groups and low income families.

The project implemented the career-centered concept at all levels of the educational ladder. It placed heavy emphasis upon reorientation of the traditional school concept about occupational education. During the process, students were exposed to occupational education as they enter the elementary school and continue learning about and preparing for the world of work as they progress through elementary, junior high, secondary, and post-secondary schools in the area.

Impact of project in terms of contribution to education:

The evaluation centered around the use of the program's educational goal and objectives as a standard by which the outcomes of the program would be assessed. Instruments were developed and field tested for use in the career project. Such instruments were used to assess the attitudes of all teachers (experimental) in the system towards the career concept. The instruments were also used to compare the means of the experimental group of teachers to a group of teachers (control) not associated with a career project. An assessment was also made concerning students' attitudes toward work and their knowledge of careers. Students in the career project (experimental group) were compared to students in a neighboring school district (control group). Students in the experimental group (elementary, junior high and high school levels) exhibited more positive attitudes about careers and a greater knowledge of careers than did students in the control group. In addition, other evaluative data were collected by reviewing reports, conducting visits to the career projects, reviewing and examining instructional materials, and conducting interviews with teachers, administrators and personnel from the State Department of Education who monitored the project.

Methods and techniques refined in this project have been disseminated and adopted by 22 school systems in the state. The project has been used for in-service education programs for teachers in school systems beginning career education programs.

Project Resume

Project Title: "The Development and Implementation of an Individually Scheduled Cluster Curriculum in Occupational Education"

Agency: Sanford/Lee County Schools
Sanford Central High School
Sanford, North Carolina 27330

Project Director or Contact Person (Name, Address, Phone): Mr. Everette Bradley, Sanford Central High School, Sanford, N. C. 27330 (919)776-7541 or Dr. Jesse S. Clemmons, Occupational Research Unit, State Department of Public Education, Raleigh, N. C. 27611 (919)829-3800

Duration: From October 1, 1971 To June 30, 1974

Funds: Federal $ 223,494 State $ 24,833 Other $12,000 Local

Purpose of Project: (1) to develop a model for providing individualized instructional in occupational education,(2) to produce curriculum materials for implementing the model,(3) to try-out and revise the model and materials,(4) to field-test the model and materials, and (5) to service as a demonstration/in-service site.

Description of Project: A conceptual model for individualized instruction was developed through searching the literature, visiting promising programs around the Nation, and extensive work with local and State advisory committees. Individualized instructional materials were developed in the areas of drafting, carpentry, masonry, machine shop, distributive education, and typing through a variety of strategies including a contract with a private corporation, a contract with a teacher education institution, and efforts of teachers in the project school. The materials are competency based and include supporting multi-media.

Outputs of the Project include individualized instructional materials with supporting sound-slide multi-media and a documented procedure for the installation of a system to manage the instructional process. The instructional materials are on a "task package" format which includes (1) rationale, (2) performance objective, (3) learning activities, (4) learning practices, and (5) unit post tests.

The system of instruction was piloted during 1972-73 and both printed materials and multi-media were revised during the Summer of 1973. During the school year 1973-74 the instructional system was field-tested in 16 sites across the State.

Final reports of the project are available upon request.

Impact of project in terms of contribution to education:

1. Use of materials during first year following project (1974-75).

Subject Area	Number of Teachers Using	Students Involved
Carpentry	80	2000
Masonry	80	3000
Drafting	60	2800
Machine Shop	10	450
Typing	75	4500
Distributive Education	40	1200

2. Number of teachers trained in use of materials.

Type of Training	Number of Teachers
3-Week On-site Workshop	115
1-Week Internship	240
Informational Sessions	300
1-Week Workshops (Some Exposure)	300
University Courses (D.E.)	40

3. Statewide dissemination.

The project school served as a demonstration/in-service site for 16 teams of teachers (approximately 7 teachers per team.) These 16 teams, in turn, established demonstration sites in their home schools and hosted a total of 34 teams of teachers for one week internships. The 50 demonstration sites are continuing to be strengthened by intensive SEA consultation. Master copies of the materials are provided to LEAs requesting them. In addition, the project staff provides consultative assistance to school implementing the instructional system.

4. National dissemination.

The materials have been distributed to other RCUs and state departments and are being used in at least three states. The project staff has helped to train teachers and implement programs in several states. We have had very favorable feedback from other states.

5. Post-project status.

Since project funds have terminated the project school has continued using the materials developed plus expanding the concept to other subject areas. Materials have subsequently been developed in the areas of business, health occupations, and disadvantaged (Individualized materials have been developed in the areas of "listening" and "speaking" for disadvantaged students.) The school is still receiving visitors and participating in workshops and conferences. The individualized program at the project site is stronger now than it was during the project period.

Project Resume

Project Titles: (1) "Manpower Information Manual: A Manual for Local Planning"
(2) "The Dissemination of Local-Level, Long-Range Planning Systems to North Carolina Technical Institutes and Community Colleges"

Agency: North Carolina Department of Community Colleges

Project Director or Contact Person (Name, Address, Phone):

Marcus D. Allred
172 Education Building
Raleigh, North Carolina 27611 (919) 829-2282

Duration: From July 1, 1971 To June 30, 1974

Funds: Federal $71,041 State $23,680 Other

Purpose of Project: To produce and disseminate model information systems for technical institutes and community colleges in order to improve planning capabilities (The planning systems include components for surveying (1)business & industry, (2)aspirations of high school students,& (3)follow-up of graduates & early leavers.)

Description of Project:

The products of these projects were procedures and instruments for collecting, assembling, and disseminating the necessary information for initiation of long-range plans at the local technical institute/community college level. These developed methods have been published in the manuals, Manpower Information Manual - A Manual for Local Planning, and Long-Range Planning Systems.

Many studies have been prepared on the need for manpower information to facilitate long-range planning, curriculum development, and counseling for vocational education. Few studies addressed themselves to the complete effort required to develop an information system that could be used for full guidance for vocational education. These projects were intended to fill this recognized information gap.

The procedures and instruments have served as the guide for the development of individual long-range plans in the 57 technical institutes and community colleges in the North Carolina System.

Impact of project in terms of contribution to education:

1. Development of Information System and Planning Model

a. Survey	Number Involved	Counties
. High School Student	3,000	3
. Business and Industry	500	3
. Student Follow-up	1,000	

b. Number of institutional plans developed 1

2. Dissemination of Developed Systems

a. Survey	Number of Community Colleges and Technical Institutes Conducting Survey
. Student	24
. Business and Industry	19
. Follow-up	18

b. Number of institutions submitting Long-Range Plans 57 (100%)

c. Number of In-Service Workshops 30

3. Distribution of Published Materials

a. All 57 presidents in North Carolina System
b. All 50 state directors of Community College Systems
c. 200 on request from interested parties
d. Published in ERIC
e. Research Coordinating Units in all states

4. Summary of Impact on Education

a. High school students were surveyed in more than 30 counties.
b. Businesses and industries were surveyed in more than 20 counties.
c. Technical institute/community college graduates and early leavers were surveyed in 18 institutions.

The above data became part of the plans developed by the 57 institutions.

Project Resume

Project Title: Preparation of Instructional Material for a Two-Semester Sequence of Technical Mathematics in an Engineering Technology Curriculum

Agency: Tulsa Junior College

Project Director or Contact Person (Name, Address, Phone):
James E. Price, Richard R. Martin, and Larry D. Jones; Tulsa Junior College, Tenth & Boston, Tulsa, Oklahoma 74119; (918) 587-6561

Duration: From June 1, 1971 To August 31, 1972

Funds: Federal $13,370.00 State $500.00 Other $1,020.00

Purpose of Project: To develop a technical mathematics textbook specifically sequenced to give engineering technology students the mathematical skills needed for practical application in their technology courses.

Description of Project: Traditionally, mathematics is structured and is taught beginning with Algebra and proceeding through Trigonometry and Calculus. Many concepts in each are very closely related and could be introduced simultaneously. A two-year technical education program exposes students to a variety of mathematical concepts very early in their first semester. This related concepts approach was developed to introduce students to those concepts needed early so that learning of math concepts can be enhanced by their practical application.

Two mathematics and one engineering technology instructor collaborated in sequencing the mathematical concepts to correlate with an electro-mechanical curriculum developed by TERC and Oklahoma State University. Typewritten textbooks were developed in line with the agreed upon sequence.

The materials were tested during the 1971-1972 school year with freshman technology students at Tulsa Junior College. Near the end of the spring semester, the materials were critiqued by the students and by technology instructors at Oklahoma State University. Based on those critiques and the experience of technology teachers whose students used the materials, they were revised during the summer of 1972. Chapters 6, 9, and 10 were virtually rewritten and Chapter 11 was added. Technical examples or problems were added in all chapters. The materials were presented at a state-wide conference of technical teachers and received very favorable response.

Impact of project in terms of contribution to education:

The text was used at Tulsa Junior College a second year in revised typewritten form after the project was completed. It is presently used at Tulsa Junior College in published form.

The successful use of the text by technology students has resulted in its being published by the Charles E. Merrill Publishing Company. The text is now in use in a number of technical programs across the country.

Project Resume

Project Title:

Mobility Program in the Health Field

Agency:

Health Occupations Education Division
Oklahoma State Department of Vocational and Technical Education

Project Director or Contact Person (Name, Address, Phone):
Dr. Patricia Jamison, State Supervisor, Health Occupations Education, State Department of Vocational and Technical Education, 4024 N. Lincoln Blvd., Oklahoma City, Oklahoma 73105 (405) 521-3305

Duration: From October 1, 1972 To May 26, 1973

Funds: Federal $4,400.00 State $1,000.00 Other

Purpose of Project: To establish feasibility of developing a formal, organized, wide-agreed upon, and accepted program for assuring the most effective and efficient advancement of persons interested in expanding their competencies and responsibilities in health occupations.

Description of Project: The objectives of the study were to design a career mobility program which might provide the necessary arrangements so that individual advancement in the health field may be facilitated; and to secure administrative agreement on the arrangement necessary to provide credit for previous training and experience.

Data regarding career mobility and barriers to career mobility were collected via personal interviews, mail questionnaires, telephone interviews, and meetings from 67 directors of nursing and nurse-related programs from the secondary through the baccalaureate levels in Oklahoma. These data were interfaced with information on currently implemented career mobility plans and with policy statements of concerned agencies and institutions to develop two Proposed Health Occupations Career Mobility Plans. One plan was essentially a "credit by examination" approach for use in advancing through programs requiring college credit. The other plan proposed development of assessment instruments plus utilization of an integrated curriculum for advancement in non-credit programs such as Nurse Aide and Practical Nurse.

The plans were presented to the program directors and their institutional administrators for reaction. The development of a career mobility program was considered to be feasible when: 36 of the 43 schools agreed to participate in implementing a program; and 48 of the program directors made personal commitments to work in the development of such a program.

Impact of project in terms of contribution to education:

As a direct result of the project, a career mobility program is gradually taking shape in Oklahoma. Many individuals are continuing their health occupations training because they are being given credit for previous training and/or experience. Several Associate Degree Nurses have now progressed through the Nurse Aide-Practical Nurse program sequences.

The following have been accomplished:

1. A publication has been developed to list the career mobility programs in health occupations in Oklahoma. Initially, 21 nursing and health-related career mobility programs were identified. A system was established for continually updating this information. The publication is in use by instructors, counselors, students, and prospective students to plan for the most efficient means for students to attain their health occupation goals--on an individual basis.

2. An integrated curriculum has been developed and is in operation whereby a student satisfactorily completing a nurse aide program will have completed the first one-third of a practical nurse program.

3. A research has been completed which relates the "Fundamentals of Nursing" courses in Oklahoma's practical nurse and associate degree nurse programs. An instrument has been approved which measures student achievement on the cognitive concepts of the course.

4. Challenge exams have been developed by several of the colleges. Students in one junior college may challenge any academic or health occupations course and may obtain an Associate Degree with a minimum of 12 credit hours from the college. Committees have been formed across campuses for the purposes of "standardizing" challenge exams in specific health occupations courses.

The differences between manpower demand and supply of Associate Degree and Practical Nurses have been reduced in Oklahoma since the project was initiated. If the trend continues, we can anticipate that the educational system, with no additional programs, can produce the supply of nurses necessary to meet demands. Such result can be attributed, in large part, to the reduction in duplicated effort by students taking advantage of the health career mobility program.

Project Resume

Project Title:

Vital Information for Education and Work (VIEW)

Agency:

South Carolina Department of Education, Office of Vocational Education

Project Director or Contact Person (Name, Address, Phone):

Mr. Christopher J. Lerstang, 202 Rutledge Building, 1429 Senate Street
Columbia, South Carolina 29201 TELEPHONE: (803) 758-2358

Duration: From June 1972 To Present

Funds: Federal $138,123 State _____ Other _____

Purpose of Project: To provide an occupational information system by which students and counselors will have easy access to the most current information available about jobs.

Description of Project: The project was designed to identify and select information categories pertinent that would interest individuals seeking to learn about one or a variety of jobs. The project was also aimed at developing an economical and efficient method of presenting the information to the user.

The original VIEW staff selected microfilm on an IBM aperture card as the primary vehicle for the information. The categories selected were: job descriptions; basic physical and mental requirements; special entry requirements (license, permit, certificate); fringe benefits; job availability; opportunity for a promotion; wages; usual working hours; additional sources of information; related jobs in the VIEW deck.

The VIEW deck of aperture cards includes an alphabetical list of the occupations in the deck. Each counselor was provided a copy of the counselors manual, produced by the VIEW staff, to explain how the VIEW materials should be used. The manual also explains the coding system on the aperture cards and describes each information category in detail. Five indexes make up the list section of the counselors manual which includes: an alphabetical index of occupations; an index categorizing the occupations by the 15 USOE clusters; a cross-reference index of jobs within the VIEW deck; a worker-trait group index; and information sources index.

Impact of project in terms of contribution to education:

The original VIEW deck consisted of 100 occupations and 20 apprentice training program cards related to the selected occupations. The criteria used to select the FY '72 occupations was, high job demand and training available within the state. During FY'73 a survey was made to determine the effectiveness of the system and students interests in VIEW. The survey also indicated the amount of student interest in jobs not included in the FY'72 deck. Using student interest as a third criterion for the selection of jobs and the expansion of the information offerings, the deck was increased from 120 occupations in FY'72 to 208 in FY'73. The 120 card deck was placed with a reader-printer machine in each of 232 vocational centers and high schools during FY'72 serving nearly 90% of the secondary school students in the State. The machines were provided through Part C funds on a 90-10% matching basis.

During FY'74 the deck was expanded to 300 occupations with revisions and updates in the previously developed materials. Due to the amount of interest demonstrated by school personnel not participating in the project, the decision was made to increase the number of participants based on the participants desire to incorporate the VIEW materials into their educational setting. Again the machines were provided on a 90-10% matching basis and the number of participating schools soared from 232 to 454, an increase of 212. The expansion picked up all of the previously non-participating vocational centers and high schools in the state and included all junior high and middle schools containing the seventh grade. The current participating rate is as follows:

High Schools	225
Junior High and Middle Schools	184
Vocational Centers	45
Total	454

This total represents more than 90% participation of junior high and high schools in the state not having accessibility to current information.

Project Resume

Project Title: The Development of a Statewide Curriculum Based on the Concept of Behavioral Objectives in the Area of Graphic Communications.

Agency: The South Carolina Department of Education through the Charleston County School District and Oconee County School District

Project Director or Contact Person (Name, Address, Phone):
Phase I Director - Gregory G. Morrison; Phase II Director - David A. Dailey
Current Director - Dr. J. Page Crouch, Clemson University, Clemson, S. C.
Telephone: (803) 656-3447

Duration: From November, 1971 To June, 1973

Funds: Federal $48,453. State _____ Other _____

Purpose of Project: To develop self-paced, self-instructional Graphic Communications Curriculum materials based on up-to-the minute data, reflecting the needs of the graphic communications industry.

Description of Project: The project was initiated with the intention of producing curriculum materials that would improve the learning process and create a standardized curriculum that could be used more effectively by the instructors to meet the various needs of the vocational students.

The first phase of the project (November 1971 to June 1972) was responsible for the development of a two year course of study consisting of: (1) A 300 page curriculum guide consisting of 6 units including course and unit objectives; unit content outlines; lesson plans; student assignments; competency tests; pre-tests and post-tests.; (2) Ten self-instructional slide programs with tape cassettes covering the basic and most used educational topics in graphic communications.

The second phase (August 1972 to June 1973) was responsible for the expansion and revision of the phase one materials. The final product consisted of: a revised curriculum guide; 30 additional slide programs (totaling 40); and 30 learning activity packages.

Impact of project in terms of contribution to education:

The impact of this project is widespread. It has incorporated the participation of and input from 14 of 16 South Carolina Graphic Communications Instructors (during Phase I), The South Carolina Department of Education, Clemson University, Graphic Communications Faculty and the Printing Industries of the Carolina's Foundation (PICA).

The PICA Foundation (a non-profit making organization) provided funds that made the 3 state (North Carolina, South Carolina and Georgia) survey of the printing industry possible. The survey provided the necessary data needed to incorporate the needs of industry into the curriculum materials. PICA also supported the effort through various publicity methods and sources accessible to its organization. Additional PICA funds were used to support supplementary activities that eventually made the project a success.

The Department of Education provided guidelines and funds available through Part C Section 131 (b) of Public Law 90-576, for Phase I and Phase II.

The South Carolina Graphic Communications teachers provided manpower and knowledge during the Phase I development process. They were instrumental in the writing and designing of the materials. During the second phase they were responsible for providing facilities and equipment used in the slide programs, and the review of the materials prior to reproduction for distribution.

Clemson University Graphic Communications Staff provided consultant services to design the curriculum development effort, provided expertise in the use of various curriculum construction techniques and methods, and technical support and assistance pertaining to the graphic communications industry and technological advancements.

Upon conclusion of the Phase II effort a decision was made between the PICA Foundation and the South Carolina Department of Education to make the materials available to as many schools, businesses and industries as possible. Now through a cooperative agreement between the South Carolina Department of Education, PICA Foundation and Clemson University, the materials are being produced, revised, expanded and distributed throughout the world.

All of the South Carolina Graphic Communications programs (approximately 25) have received and incorporated the new curriculum materials into their instructional program. The materials are being used in junior high programs (pre-vocational education) secondary vocational programs, post-secondary technical education programs, colleges, universities, and for in-plant training in large and small printing organizations and related graphic communications businesses. The materials have been distributed to 35 states within the United States and three foreign countries.

One of the most important achievements is that the success of this effort would not have been possible without the cooperation between business and industry, graphic communications instructors, university staff and the Department of Education working toward a common goal.

Project Resume

Project Title:
Project INFOE (Information Needed For Occupational Education)

Agency:
Tennessee Research Coordinating Unit

Project Director or Contact Person (Name, Address, Phone):
Dr. Walter A. Cameron
2020 Terrace Avenue
Knoxville, Tennessee 37919 Phone: (615) 974-4466

Duration: From October 1, 1971 To June 30, 1975

Funds: Federal _____ State _____ Other _____

Purpose of Project: To develop and evaluate an articulated, statewide occupational information program for grades K-14.

Description of Project: During the past four years, a statewide occupational information program has been developed and evaluated for the State of Tennessee. The four components of the program are: (1) Primary INFOE (Information Needed For Occupational Enlightenment) consisting of filmstrips, audio recordings and teacher guides for students (K-3); (2) Elementary INFOE (Information Needed For Occupational Exploration) consisting of 500 cartoon formatted career briefs, teacher guides and overhead transparencies of career clusters for students (Grades 4-6); (3) Junior High INFOE (Information Needed For Occupational Exploration-In Depth) is designed to provide seventh through eighth grade students with exploration of 15 career clusters, 360 job titles and major vocational programs; (4) Secondary INFOE (Information Needed For Occupational Entry) is designed to provide specific occupational and educational planning materials for secondary and postsecondary school students.

Impact of project in terms of contribution to education:

The development and evaluation activities of Project INFOE have provided for the following impact of each INFOE component:

1. Primary INFOE--has resulted in an articulated collection of information on career concepts which can be integrated into regular classroom activities. Produced materials will be marketed nationwide by a commercial company.

2. Elementary INFOE--has resulted in a refined set of materials for integrating career clusters and general job information into the classroom for students in grades four through six. Currently the materials are being used in schools from six different states.

3. Junior High INFOE--has resulted in a refined systematic exploratory program for career decision-making by seventh, eighth and ninth grade students. Is currently being used by 5,000 junior high students in Tennessee during the field test period.

4. Secondary INFOE--now serving 350 schools with localized information on job and educational opportunities in Tennessee. Approximately 80,000 in Tennessee have used the materials developed for this component.

Overall impact:

Technical assistance on development, planning and evaluation techniques have been provided for representatives from ten states on the Occupational Information Systems.

Project Resume

Project Title: The Development of an Information Retrieval and Dissemination System for Vocational Education in Tennessee

Agency: The College of Education, The University of Tennessee, Knoxville

Project Director or Contact Person (Name, Address, Phone):
Dr. Garry R. Bice, Mrs. Dee Wilder, Tennessee Research Coordinating Unit, 909 Mountcastle Street, Knoxville, Tennessee 37916

Duration: From July 1, 1970 To June 30, 1971

Funds: Federal _____ State $41,461 Other _____

Purpose of Project: To develop and operationalize an information retrieval and dissemination system for vocational education personnel in the State of Tennessee.

Description of Project:

During this first year of operation, the specific objectives of the project were to:

(1) develop a physical facility to house research and related materials;
(2) develop a cataloging and filing system in order that material may be retrieved with minimum effort in a short period of time;
(3) install microfiche readers and files of materials that are readily accessible to every vocational educator in the State of Tennessee;
(4) install ERIC tapes on computers to facilitate the retrieval of information;
(5) develop a record keeping system that will aid in evaluating the use of the total system;
(6) conduct inservice workshops to train vocational educators in Tennessee to use the system facilities; and
(7) provide information retrieval and dissemination services to educators as requested.

Impact of project in terms of contribution to education:

The Information Retrieval and Dissemination System has continued to operate through June 30, 1975, both expanding and refining its services. The addition of regional staff to encourage and clarify the use of services saw increased involvement by thirteen Regional Resource Centers located in Area Vocational Schools and Community Colleges.

The development of a Selective Dissemination of Information Sub-System for secondary and postsecondary vocational teachers provided individuals with regular announcements of new instructional materials and tripled the use of ERIC microfiche throughout the state.

The Query search system was refined and duplicate copies of completed searches offered through the Index to Query Computer Searches disseminated both in-state and out-of-state.

A regular newsletter, the RCU Circulator, Career Education Abstracts, and other regular alerting mechanisms such as the New Publications List, were circulated to appropriate target audiences and served to help the public informed of new documents, materials, and programs in various areas of interest.

The maintenance of a Career Education Corner served individuals both on and off-campus in such a way that new materials could be previewed and ideas adapted without a great deal of expense to the practitioner.

The Information Retrieval and Dissemination System enabled the transfer of many of the current research results in the form of microfiche and hard copy from library shelves to vocational educators throughout the state. The benefits to education in this area were realized in program improvements, decision-making, and numerous other areas.

The system also served as an example for the development and implementation of information retrieval and dissemination systems within the state and in a number of locations outside the state of Tennessee.

Project Resume

Project Title: A Survey of the Occupational and Educational Needs of the American Indian in Dallas County

Agency: Dallas County Community College District
Main Bank Building
Main and Lamar Streets
Dallas, Texas 75202

Project Director or Contact Person (Name, Address, Phone): Mr. Lyndon McClure, Coordinator of Special Projects, Dallas County Community College District, Main Bank Building, Main and Lamar Streets, Dallas, Texas 75202 (214) 746-2131

Duration: From November 1, 1971 To March 31, 1973

Funds: Federal $52,560 State 0 Other $5,850

Purpose of Project: To collect, analyze, report and disseminate information pertaining to the occupational and educational needs of American Indians in Dallas County, Texas, for use in vocational education program planning.

Description of Project: In 1971, during a minority recruitment project, Dallas County Community College District discovered that reliable information about the American Indian population in Dallas County was not available from any source. This study, supported with Part C funds made available through the Division of Occupational Research and Development, Texas Education Agency, was initiated to determine the occupational and educational needs of American Indians in Dallas County.

The project co-director, all members of the project advisory committee, and all interviewers were American Indians. The advisory committee developed a survey instrument containing 84 questions grouped into four categories: personal characteristics, education, employment, and culture. More than 1,260 families, representing 52 tribes, participated in the study.

Significant findings of the study were: (1) Most of the older Indians who participated in the study came to the Dallas area because of a greater chance of employment and were planning to remain for the same reason, but many of the younger participants expressed a desire to return to their ancestral home, (2) 46% of the respondents had not completed high school, (3) 49% of the respondents had never received any employment or educational assistance from the Bureau of Indian Affairs, (4) 36% of the respondents were unemployed, (5) 42% of the unemployed respondents had been unemployed for one year or longer, (6) 87% of the respondents indicated they would be willing to continue their education if they thought it would better their lives.

Impact of project in terms of contribution to education:

A comprehensive final report, describing the study and the outcomes of the study was published and disseminated in 1973. The report included several specific recommendations for action by educational program planners. One recommendation stated:

> "Public education institutions should make special efforts to get Indians involved and Indian organizations should make an effort to use the services of their public schools for career and adult education."

The Dallas County Community College District responded to this recommendation by the development and initiation of a special project entitled "Cooperative Education for American Indians in Dallas County." Initially, 88 American Indians were in the cooperative program and preliminary evaluation indicates the program has been successful in meeting the needs of the participants.

Information obtained during the study was utilized by the American Indian Center in Dallas as a basis for the development of the pre-school program and a youth program with funds made available by the Office of Indian Education. The American Indian Center has also utilized the findings of the study in the development of a cooperative adult education program which will involve the Dallas Independent School District, the Dallas County Community College District, and the Dallas Public Library.

The Inter-Tribal Center and Clinic, another Dallas Indian organization, also used the findings of the study to develop a manpower training program which has been funded by the Department of Housing and Urban Development.

Additional impact of the study is reflected in an increased awareness among Dallas agencies and institutions concerning the problems and needs of American Indians.

As an outgrowth of the study, the Dallas County Community College District presently operates three outreach programs designed to recruit and counsel American Indian students and members of other minority groups. The District has received financial assistance from the Department of Health, Education and Welfare for support of these programs.

The final report was disseminated widely throughout the State of Texas and was sent to State Departments of Education in 49 other states. The report was summarized in the July, 1974, issue of Research in Education under ERIC accession number ED 088 623.

The results of the study have been of value to the Dallas County Community College District and to the Texas Education Agency in the development of programs and the allocation of funds to meet the needs of a special needs population, as provided for in the Vocational Education Act of 1963, as amended, and other federal legislation.

Project Resume

Project Title:

Mexican American Youth and Vocational Education in Texas

Agency: Center for Human Resources
University of Houston
Houston, Texas

Project Director or Contact Person (Name, Address, Phone):
Dr. J. Earl Williams, Director
Center for Human Resources, University of Houston
Houston, Texas 77004 (713) 748-6600

Duration: From July 1, 1971 To February 28, 1973

Funds: Federal $115,806 State 0 Other $12,867

Purpose of Project: To collect, analyze, interpret, publish and disseminate information essential for the development of educational programs to meet the needs of Mexican Americans in Texas.

Description of Project: This project was initiated in recognition of the need for information suitable for vocational education planning for Mexican Americans. Financial support for the study was provided through the Division of Occupational Research and Development, Texas Education Agency, with funds made available under Part C of the Vocational Education Amendments of 1968.

The project as monitored and assisted by an advisory board consisting of prominent and knowledgeable representatives of educational systems at the secondary and post-secondary levels, placement agencies, State entities concerned with vocational-technical education, and community agencies serving the disadvantaged Mexican American population.

The project staff, with the assistance of the advisory board developed a survey instrument designed to elicit essential planning information from seven target groups: (1) vocational education students, (2) nonvocational education students, (3) vocational education graduates, (4) high school dropouts, (5) employers, (6) parents of vocational education students, and (7) community leaders, school personnel, and placement personnel.

The survey instruments were administered to more than 2,100 persons in 10 communities in 4 geographically and/or sociologically distinct areas of Texas. Population centers in the survey were Houston, San Antonio, Austin, El Paso, Midland, Odessa, Laredo, Del Rio, Eagle Pass, Brownsville, and McAllen. The majority (1,693) of the individuals interviewed were Mexican American high school students.

Impact of project in terms of contribution to education:

Some of the many findings of the project were: (1) Almost all students interviewed indicated a need for a job orientation course in high school and said they would participate if the course was offered. Graduates, dropouts, employers, and community and school personnel identifies as essential a "job hunting" course at the high school level; (2) Most of the vocational education students interviewed liked their program and believed the skills learned in vocational education would be helpful in their future job, but they also indicated the use of Spanish in the classroom would help them learn better--this was especially true in the border areas; (3) Vocational education graduates and dropouts stressed the need to get a job; dropouts stated this was the major reason for their leaving school; (4) Most of the parents interviewed identified economic matters as their major concern, but viewed "success" as job satisfaction rather than the amount of money made; (5) Employers viewed vocational education positively but believed real training occurred on the job. They saw lack of experience, lack of skills, and inability of students to present favorably, as the three major problems students had when looking for a job. Employers stressed closer cooperation between themselves and the schools and suggested more emphasis be placed on placement activities; and (6) Community and school personnel interviewed generally viewed vocational education in a positive manner but expressed reservations about its adequacy and operation, expecially as it concerned Mexican American students. They believed counseling was inadequate and also suggested a better "screening process" be developed to recruit students into vocational education.

The findings also indicate that while Mexican Americans hold a high percentage of the common labor, semi-skilled and farm jobs in the State, they are only minimally represented at the technical and professional levels, even in geographic areas where they constitute a major portion of the population. The study documents the fact that Mexican Americans in Texas are more economically and educationally handicapped than other groups in the State, with the South Texas border counties exhibiting the highest evidences of unemployment and the lowest socioeconomic rates in the State.

A 596 page final report entitled "Mexican American Youth and Vocational Education in Texas" includes 71 specific recommendations based on the findings of the study. The study was focused on the special needs of Mexican American youth, but many of the recommendations are directed toward the improvement of the total program of public vocational education for all ethnic groups in Texas. Although the long-term impact of the study is not yet observable, the large volume of information collected and the resulting specific recommendations should continue to be of value to educational program planners throughout the State of Texas and in other states with large Mexican American populations.

The final report is summarized in the August, 1973, edition of Research in Education under ERIC accession number ED 075117.

Project Resume

Project Title:
An Evaluation System for Vocational Education in Virginia

Agency: Division of Vocational and Technical Education, College of Education, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

Project Director or Contact Person (Name, Address, Phone):
Dr. J. Dale Oliver, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

Duration: From February 15, 1971 To June 30, 1974

Funds: Federal $340,876 State $37,875 Other

Purpose of Project: To develop a management information system for planning and programming of vocational education.

Description of Project:

1. This project was directed toward solving the problem of providing valid, timely, and reliable information to use in evaluating, planning, and accounting for federally supported vocational and technical education programs.
2. The MIS developed by this project contained two subsystems. These were the macro-subsystem, concerned with providing information at the state level and the micro-subsystem, designed to provide information to local decision-makers. The macro-subsystem came to be known as the Vocational Education Management Information System for Virginia (VEMIS-V). This subsystem included the following:
   1. Student enrollment by program and program information.
   2. Follow-up of former students.
   3. Personnel resources available.
   4. Facilities and equipment available.
   5. Financial resources available.
   6. Manpower demand.
   7. Student needs and interests.

   Top priority was given to the development of the first two components. They were combined into the Vocational Education Reporting System (VERS).

   The micro-subsystem dealt with program effectiveness, process-product, and cost effectiveness relationships at the local level.

Impact of project in terms of contribution to education:

The Vocational Education Reporting System (VERS) was implemented during the 1972-73 school year and has been in operation since then. This subsystem has provided for a uniform and accurate procedure for collecting data, has streamlined the process, has reduced the work of teachers and supervisory personnel, and has made the data more readily accessible to decision-makers.

The subsystem provides for the collection of data on vocational education secondary school enrollment, as well as, enrollment in adult programs. In addition, it provided for a follow-up study of both secondary and adult student completions.

Another important accomplishment was the development of an annual and five-year planning document and an annual evaluation procedure. These materials provided a means for meeting certain requirements in the Standards of Quality and Objectives for public schools in Virginia, as well as, extending the development of the personnel, resources, facilities and equipment, and financial resources. All local school divisions are now required to develop an annual plan for vocational education and a five-year plan which is updated annually. This planning has greatly affected the quality of the vocational program. Largely as a result of this planning, the vocational education enrollment at the secondary level increased by approximately 50,000 during 1974-75 over the previous school year.

Under the micro-subsystem, the major accomplishment was the development of approximately 200 units of instruction. The units for the stenographic block program were completely developed and selected units from other areas were developed.

A study was completed comparing the traditional to the block stenographic program in Business Education. It was concluded that the stenographic block program is considered preferable if: (1) the objective of the program is employment in a secretarial-stenographic occupation, and (2) the objective of the program is to provide preparation related to on-the-job requirements.

Project Resume

Project Title: Developing Performance Objectives and Criterion-Referenced Measures in Vocational Education

Agency: Division of Vocational and Technical Education, College of Education, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061

Project Director or Contact Person (Name, Address, Phone):
Dr. J. Dale Oliver, Division of Vocational and Technical Education, Virginia Polytechnic Institute and State University, Blacksburg, VA 24061 (703) 951-5237

Duration: From January 1, 1974 To June 30, 1975

Funds: Federal $76,068 State $8,452 Other

Purpose of Project: To develop catalogs of performance objectives and criterion-referenced measures in selected occupational areas.

Description of Project: One of the primary purposes of vocational education is to prepare individuals for gainful employment as semi-skilled or skilled workers or technicians or subprofessionals in recognized occupations and in new and emerging occupations. In order to accomplish this, it is necessary that the preparation be closely related to the occupations which the individuals plan to enter. Two important questions arise: (1) What are the tasks performed by workers in the various occupational areas?, and (2) What performance objectives and criterion-referenced measures are needed in order to train people to enter the occupational areas? Virginia is a member of a nine state consortium which is seeking to answer these questions.

The products of this research are catalogs of performance objectives and criterion-referenced measures in the various occupational areas. The following procedures are followed in developing the catalogs:

1. Conduct a State-of-the-Art Study.
2. Develop a Task Inventory List.
3. Survey a Group of Incumbent Workers.
4. Analyze the Survey Results.
5. Prepare a Catalog.
6. In-Service Training.

Impact of project in terms of contribution to education:

One of the objectives in Virginia's Standards of Quality in public education states that by June 1976 at least ninety percent of all students leaving the public school system who are not continuing their formal education shall have job entry skills. Under the Standards of Quality, major emphasis is being placed on accountability.

The catalogs of performance objectives and criterion-referenced measures are being used by vocational education teachers to upgrade their courses of study and to bring the instructional programs in line with tasks actually performed by vocational graduates in business and industry. These tasks have been determined through an extensive survey of employees already on the job.

In-service training programs are being offered to both vocational teachers and vocational teacher educators. The reason for providing in-service training for the teacher educators is to have them include in the pre-service training programs of future vocational teachers instruction on performance based educational programs.

As this program is fully implemented throughout the state, it should have a tremendous impact on accountability in vocational education.

Project Resume

Project Title: Improving a Rural Area School Program in Vocational Business and Office Education by Utilizing an Individualized Multimedia Instructional Approach.

Agency: Preston County Schools
Preston County, West Virginia

Project Director or Contact Person (Name, Address, Phone): George A. Lipscomb, Director of Vocational Education, Preston County Schools, 121 E. High Street, Kingwood, WV 26537 A/C 304-329-0580.

Duration: From 9/1/72 To 6/30/75

Funds: Federal 58,684 State _____ Other _____

Purpose of Project: To develop, refine, and evaluate an individualized multimedia instructional approach in business education in a rural area utilizing the "open space classroom"

Description of Project: This is one of the first attempts to change the instructional approach in business education. The initial planning was done as a part of the building construction program. At that time, the local agency decided to go "open space" for business education. Other similar facilities throughout the country were surveyed and it soon became apparent that layout and instruction were conventional. Through research efforts, it was decided to go for a systems approach to instruction. This system allowed the space to be divided into three areas: student assessment/evaluation; learning resources; and work stations. Students progress on an individualized basis using job sheets which are competency based.

Impact of project in terms of contribution to education: Even though there have been some problems, the system has proven to be workable and effective. Materials have been developed and disseminated through teacher conferences at the Preston County facility. Three different and cumulative institutes (workshops) have been conducted for teachers with each institute repeated in successive summers. Approximately 135 business teachers have participated.

The project has influenced the adoption of the "open space" concept and the instructional approach in 15 newly constructed facilities in the state. Some traditional school settings have implemented this instructional approach.

Considerable interest has been shown by other states. In addition to direct inquiries, two presentations were made at national conventions of the American Vocational Association and an article on construction, which included discussion of this project, was published in the American Vocational Journal.